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Reconstruction of the life history traits in the giant salamander Aviturus exsecratus (Caudata, Cryptobranchidae) from the Paleocene of Mongolia using zygapophyseal skeletochronology

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Abstract

© 2018, © 2018 Informa UK Limited, trading as Taylor & Francis Group. Here we describe life history traits in the giant cryptobranchid salamander Aviturus exsecratus from the Paleocene of Mongolia using non-destructive approach for skeletochronological analysis based on the counting of cyclical growth rings on articular surfaces of zygapophyseal processes of vertebrae (= zygapophyseal skeletochronology). We found that Aviturus exsecratus had a similar time of the attainment of sexual maturity and decreasing of juvenile growth (5–8 years) and estimated body size at maturity (50–60% of the maximum size) as modern cryptobranchids. Maximum longevity estimated for A. exsecratus is about 25 years. A. exsecratus had a developmental trajectory similar to that of modern cryptobranchids and is not characterized by extended ontogeny. Abbreviation: PIN: Paleontological Institute; Russian Academy of Sciences; Moscow; Russia.

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Keywords

Aviturus, Mongolia, Paleocene, Skeletochronology, zygapophyses

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